

F305: Intermediate Corporate Finance
Spring Semester 2009
Prof. Vijay Yerramilli

General Information

- Office: BU 352
- Office Hours: MW 03:30pm-04:30pm, or by appointment
- Email: vyerrami@indiana.edu; ¹ Phone: (812) 855 2694
- Course web page: <https://oncourse.iu.edu>
- Class timings and locations:
 - Section 5373: BU 211, MW 09:30am-10:45am
 - Section 5374: BU 211, MW 11:15am-12:30pm
 - Section 5375: BU 211, MW 01:00pm-02:15pm

Course Overview

In this course, we will focus on “valuation,” i.e., understanding the value implications of investment and financing decisions that firms make. By the end of this course, you should be able to:

- Evaluate corporate projects and make decisions based on financial data.
- Analyze a firm's financial statements and value the firm.
- Understand how investment and financing decisions impact the value of the firm.

The course will be taught in the form of 3 modules, each of which will consist of around 9 lectures. Here is a brief description of the modules:

- Module A: Time value of money concepts applied to capital budgeting decisions.
- Module B: Financial statement analysis, firm valuation.
- Module C: Cost of capital, capital structure, and payout policy.

We will build on the time value of money concepts (hope that rings a bell!) and risk and return concepts (another bell!) that you have learned in earlier finance courses (F370 or F304). However, F305 is much more detailed and practical. As you will see, a significant component of the grade comes from real-life projects, which require complex spreadsheet modeling in Excel. Even the in-class exercises and exams will focus on applications of concepts to solving real-life problems faced by businesses.

We will also make extensive use of some of the accounting concepts from your 200 level Accounting courses. So it's a good idea to brush up on your accounting concepts, specifically, the organization of the balance sheet and the income statement.

Course Material

- “*F305 Intermediate Corporate Finance Course Packet*”: This course packet contains selected chapters from several textbooks in a customized publication, so you don't have to buy the individual textbooks. The course packet is available in the bookstores.

¹ Email is my preferred mode of communication, if you need to reach me outside of class and office hours.

- *"Excel Modeling in Corporate Finance (Second Edition)," by Craig W. Holden.* This is an excellent book to learn spreadsheet modeling in finance. Because valuation involves a lot of spreadsheet modeling, you are advised to buy this book if you are not familiar with spreadsheet modeling.
- Lecture notes, assignments,² and other useful information will be posted on the course web page at <https://oncourse.iu.edu>. You are expected to download and print the required material before coming to the class. On the days we meet in the computer lab, you will be required to download spreadsheets from the web page.

Moreover, any important announcements (especially regarding the exams) will also be made on the web page. So be sure to check this page regularly. *It is **your responsibility** to keep yourself informed of important developments pertaining to the course.*³

Grading

The grades for this course are determined on a relative basis (i.e., your grade will depend on where you stand with respect to the rest of the class). Grades will be determined as follows:

Component	Weightage
Two Group Projects:	
Project 1	10%
Project 2	20%
In-class group assignments & participation:	5%
Exams:	
Mid-term Exam 1	20%
Mid-term Exam 2	20%
Final Exam	25%
Total	100%

Following the Finance department policy, the average grade for the three sections combined will fall between 2.70 and 3.00. In practical terms, this means that:

- 20%-25% of the class will get an A or A-
- Close to 50% will get a B+, B, or B-
- Close to 25% will get a C+, C, or C-
- The median grade will be around a **B**

Notice that the grading is much tougher than in your earlier courses. Also, there is a much higher premium on an **A** grade – you will have to work really hard to get one (Given the

² I will periodically assign numerical problems from the course packet to help you assess your understanding of the concepts learnt in class. You will find the solutions to most problems in the Appendix at the back of the course packet. These assignments are not meant to be turned in, and will not be graded.

³ If you are new to OnCourse, visit <https://oncoursehelp.iu.edu> for helpful instructions.

possibility that you might be managing our retirement accounts one day, we in the finance department would not have it any other way!).

As per the policy laid down by the Kelley School of Business, *I will not offer an incomplete grade (I) once the final date for dropping the class is past.*

Projects

You have to complete two group projects as part of F305; failure to complete the projects will result in an **F**. In Project 1, you will analyze a corporate project and determine the best investment for a firm. In Project 2, you will value a firm of your group's choice. Both projects require spreadsheet modeling using Excel.

For Project 2, each group will value a different firm. You will get a chance to indicate a choice of a firm (from a list of firms that I will make available) that your group would like to value. You will get to value a firm of your choice as long as your preference doesn't clash with anybody else's. In case of a clash of preferences, I will do the allocation of firms. You must indicate your choice by March 2nd. I will randomly allocate firms to groups that do not submit their choice by this date.

These projects are expected to be professional work, and presentation is as important as the content. At a minimum:

- All text should be typed and presented in a case-like format. You should include a cover page with project title, and names of group members. The project report should be stapled or submitted in a folder.
- Apart from a *one-paragraph abstract* summarizing your findings, the report should have at least *three sections*:
 1. *Introduction*: Explain and motivate your research project. Discuss expected results. The reader should get the big picture about your project after reading the introduction.
 2. *Data and Analysis*: Discuss the project and procedures used in detail. This part can consist of several subsections. These subsections should be labeled, and must contain a brief description immediately preceding the spreadsheet and qualitative analysis.
 3. *Conclusion*: Summarize your results; keep it brief.
- Tables and figures must be clearly labeled, and must contain a description of the analysis. Each table or figure must fit on one page, or be separated in a logical manner. Tables and figures may either be incorporated into the text or included separately in the Appendix. Make sure you refer to each table and figure within the text.
- *Submit a CD containing all your Excel files* along with the project report. The grader will use this to verify that your analysis has been done correctly.

Each group will get around 15 minutes to make its presentation of Project 2. Presentations must be concise, and must focus on analysis and results. Your presentation grade will depend on how well you defend your valuation technique. *Attendance on all*

presentation days is mandatory (even if your group is not presenting), and will be reflected in your Project-2 grade.

Groups: Projects will be done in **groups of 5 members**. You may pick your own groups, but from *within your section only*. You must turn in your group requests to me on January 14th (i.e., the second class). Anyone not turning in a request by this date will be randomly assigned to a group for the entire semester. I reserve the right to redistribute groups and to make changes in order to ensure that all groups have 5 members. It is possible that some groups will end up with less than 5 members.

Please note that I will not adjudicate any intra-group disputes. Learning to cope with intra-group conflicts is part of your training.⁴ Of course, you will get an opportunity to submit *confidential evaluations of your group members* when you submit your project reports (specific guidelines for the evaluation will be provided later). Each student's project grade will be adjusted to reflect these evaluations.

Following are the **important deadlines** pertaining to the projects. To receive full credit, submit the project in class on the date it is due; late projects will be penalized.

Task	Deadline
Submission of group requests	January 14 th
Submission of Project 1 report	February 25 th
Submission of requests for Project 2	March 2 nd
Submission of Project 2 report	April 27 th
Presentations of Project 2	April 27 th , 29 th

In-class group assignments & participation

There is only one way to learn valuation concepts, and that is by repeatedly applying them to solve real-life problems faced by businesses. Every new concept we learn will be applied to a real-life example (a small numerical problem, a mini-case, or a full-fledged case), which we will collectively solve in the class. You are expected to attend the class, actively participate in this exercise, and take down notes; *I will not post any solutions to in-class examples on the web page.*

Every now and then, I will assign one of these examples as an in-class group assignment, and will give each group 10-15 minutes to collectively solve the problem on a piece of paper. I will then grade your submissions, which will contribute to the “in-class group assignments and participation” component (5% weight) of your overall grade. It is, therefore, important that you turn in your group requests by Jan 14th, so that the groups can be in place when we meet on Jan 21st.

Needless to say, if you miss a class, you will miss out on any in-class assignments assigned that day. Regardless of the reasons for your absence, there will be no make-up

⁴ Once groups are assigned, it is your responsibility to figure out who your group members are, how to contact them, etc. I will only grade one report submitted by the entire group, and will not accept multiple reports by factions within groups.

assignments. I will forgive 2 absences while computing your participation grade at the end of the semester.

Exams

You will be required to take three exams -- 2 mid-term exams and a final exam. All of these are **closed-book, closed-notes exams**, and will only focus on material covered in class since the last exam (i.e., all exams including the final exam are **non-cumulative**). You will be provided with a sheet containing the important formulae. You must bring your own calculators though.

Following are the **dates** for the exams:

- Mid-term Exam 1: February 11th, Wednesday (regular class time)
- Mid-term Exam 2: March 30th, Monday (regular class time)
- Final Exam: May 6th, Wednesday (12:30-2:30pm; venue to be announced)

If you anticipate any conflicts (for example: a religious holiday, 3 or more final exams on May 6th, etc.) with the exam times, you must inform me by the end of the second week of the course so that I can schedule an *early* exam for you. *Do not make any travel plans or schedule job interviews that conflict with exam times, especially the final exam; I will not accept that as a legitimate conflict.* You have to take the final exam at the designated time and place.

Exams will be graded in a timely fashion. Re-grading requests must be submitted to me, in writing, within a week of the grade being distributed.

What if you miss an exam?

- I do not offer make-up exams. If you miss either of the mid-term exams because of a valid reason (described below), the credit for that exam *will be redistributed over the exams that follow* (i.e., *there won't be any re-distribution over exams that you have already taken*).⁵
- Please understand that I am **not offering you an option** to miss a mid-term exam that you can exercise at will. You may miss a mid-term only for a valid reason: *family or health emergency, backed by documentary evidence*⁶ (phone calls from parent(s) will not suffice).
- If you miss a mid-term exam, you must notify me immediately (by email) and provide the necessary documentation within a week's time. If you fail to do so or if you miss a mid-term for non-valid reasons, you will get a score of 0 on it, without any grade redistributions.

⁵ For example,

- If you miss Mid-term Exam 1, the 20% weight will be equally distributed over Mid-term Exam 2 and the Final Exam. So Mid-term Exam 2 will be worth 20%+10%=30% and the Final Exam will be worth 25%+10%=35%.
- On the other hand, if you miss Mid-term 2, the 20% weight will get added to the Final Exam only, which will be worth 25%+20%=45% (**Note:** Mid-term 1 will continue to be worth only 20%)

⁶ At a minimum, a signed note from the doctor/ nurse on an official letterhead attesting that you were advised a day's rest. It is not enough to show me a slip proving that you visited a clinic.

- Missing the final exam or missing more than one exam will automatically result in an **F** (and not an incomplete).

Even if some medical/ family problem does arise, you should try and resist the temptation of missing a mid-term exam because:

- You diversify your risks better if you take all 3 exams.
- We cover more and more difficult topics as we progress through the semester. It is possible that you might find Mid-Term 2 and the Final difficult in comparison with Mid-Term 1.
- The feedback from exams is very useful (especially for those facing difficulties) in preparing for other exams, deciding whether or not to drop the course, etc.

Miscellaneous Information

Disability Services: If you need any special accommodations on account of any disabilities, you must obtain a “Testing/ Classroom Modifications Memo” from the Disability Services for Students (visit <http://www2.dsa.indiana.edu/dss/> for details). Please bring this memo to me at least 2 weeks before Mid-Term Exam 1 so that I can make the appropriate arrangements for you.

Integrity and Academic Dishonesty: All students enrolled in a course taught through the Kelley School of Business are expected to uphold the KSB Undergraduate Program Student Honor Code (visit <http://www.kelley.iu.edu/ugrad/honorCode.cfm>), regardless of whether or not they are business majors, and the IU Honor Code (visit <http://www.dsa.indiana.edu/Code>). Activities violating these codes will result in an **F**.

I wish to specifically draw your attention to the provisions in the code dealing with plagiarism: “*Plagiarism is defined as presenting someone else’s work, including the work of other students, as one’s own. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged...*” It is very important to keep this in mind as you submit your project reports. Please ensure that you cite every source of information you use (say analyst reports, Wikipedia, etc.).

My Bio

I am an Assistant Professor of Finance at the Kelley School of Business. I joined Kelley in August 2005 after obtaining my Ph.D. at the University of Minnesota. My research interests are in the areas of financial contracting (i.e., contracts between firms and institutional investors, such as banks and venture capitalists), financial intermediaries, venture capital finance, and corporate finance. You will find more details about my research on my webpage at <http://www.kelley.iu.edu/vyerrami>.

I am a native of India, where I obtained my bachelor’s degree in Electronics and Communication Engineering, and an MBA in finance. I worked as an equity analyst in a mutual fund in India for 3 years before moving to a Ph.D. program and a career in academics.

Class Schedule

This is a tentative schedule, and is subject to change (not the exam or submission dates, though). You will find all the listed readings and recommended problems in the custom published course packet. Answer keys to the end-of-chapter problems are in the appendix of the course packet.

MODULE A: CAPITAL BUDGETING			
<i>Class Number</i>	<i>Topics Covered</i>	<i>Required Reading and Assignments</i>	<i>Recommended Problems and Spreadsheet Exercises</i>
1 (Jan 12)	<u>Introduction (Read this yourself)</u> <ul style="list-style-type: none"> • Corporation as a business form • Goal of a Financial Manager <u>Review Financial Tools</u> <ul style="list-style-type: none"> • Valuation Basics • Time Value of Money 	RWJ ⁷ Ch 1 RWJ Ch 6	
2 (Jan 14)	<u>Review Financial Tools</u> <ul style="list-style-type: none"> • Annuities, perpetuities • Inflation 	RWJ Ch 6 GROUP ASSIGNMENT REQUESTS DUE	<ul style="list-style-type: none"> • Practice Problems 1 (web page) • RWJ Ch 6 Questions 66, 68, 73 • Holden Part 1, Ch 1- 4
Jan 19	NO CLASS: Martin Luther King Jr. Day		
3 (Jan 21)	<u>Cash Flow Analysis (I)</u> <ul style="list-style-type: none"> • Effects of Accrual Accounting • Free Cash Flow 	BS ⁸ Ch 2.1	<ul style="list-style-type: none"> • Practice Problems 2 (web page)
4 (Jan 26)	<u>Cash Flow Analysis (II)</u> <ul style="list-style-type: none"> • More Free Cash Flow 	BS Ch 2.1	
5 (Jan 28)	<u>Capital Budgeting</u> <ul style="list-style-type: none"> • Incremental Project Cash Flow • Net Present Value 	RWJ Ch 10	RWJ Ch 10 Questions 2, 7, 14, 15
6 (Feb 02)	<u>Comparing Projects</u> <ul style="list-style-type: none"> • Projects of equal life • Equivalent Annual Cost 	RWJ Ch 10	RWJ Ch 10 Questions 18, 21
7 (Feb 04)	<u>Project Analysis (I)</u> <ul style="list-style-type: none"> • Managerial Options • Explanation of Project 1 	RWJ Ch 10	RWJ Ch 10 Questions 27, 28
8 (Feb 09) MEET IN BU419	<u>Project Analysis (II)</u> <ul style="list-style-type: none"> • Scenario Analysis • Sensitivity Analysis • Spreadsheet Modeling Review for Mid-term Exam 1	RWJ Ch 11 Holden Ch 10 & 11 <i>Download files from web for class</i>	RWJ Ch 11 Questions 3, 4; Critical Thinking Questions 2, 8 Holden Ch 10 & 11 probs Practice exam and Review of Topics (see web page)
9 (Feb 11)	Mid-term Exam 1 – Module A	In the classroom, During class time	

⁷ Stands for the Ross, Westerfield & Jordan textbook

⁸ Stands for the Benninga & Sarig textbook

MODULE B: VALUATION OF THE FIRM			
<i>Class Number</i>	<i>Topics Covered</i>	<i>Required Reading and Assignments</i>	<i>Recommended Problems and Spreadsheet Exercises</i>
10 (Feb 16)	<u>Discounted Cash Flow Valuation</u> • Sequential Valuation	BS Ch 3	Practice Questions 4 (web page)
11 (Feb 18)	<u>Projecting Sales Growth</u> • Trends in sales growth • Relation to Industry • Economic Analysis: Regressions Explanation of Project 2	BS Ch 5	BS Ch 5 Questions 5.1
12 (Feb 23)	<u>Financial Statement Analysis (I)</u> • Ratio Analysis • Dupont Identity • Company Example	RWJ Ch 3 Holden Ch 13.4 & 14	• RWJ Ch 3 Questions; Critical Thinking Questions 2,7,9,22,26 • Holden Ch 14 problems
13 (Feb 25) MEET IN BUS 419	<u>Financing Modeling (I)</u> • Relation between Financial Statements • Solving by iterations • Financing with Debt	BS Ch 4 <i>Download files from web for class</i> Project 1 due	The in-class computer applications provide the best practice problems
14 (Mar 02) MEET IN BUS 419	<u>Financial Modeling (II)</u> • Maintaining debt-equity ratios • Using Cash Reserves	<i>Download files from web for class</i> Submit company requests for Project 2	
15 (Mar 04) MEET IN BUS 419	<u>Projecting the Financial Statements</u> • Projecting Financial Ratios • Variable vs. Fixed Costs • Replacement of Fixed Assets	Holden Ch 13	Holden Ch 13 problems
16 (Mar 09) MEET IN BUS 419	<u>Case Application (I): Introduction</u> • Introduction to Case • Smucker's Sales Growth	BS Ch 7 <i>Download files from web for class</i>	
17 (Mar 11) MEET IN BUS 419	<u>Case Application (II): Pro-formas</u> • Projecting Smucker's Financial Statements	<i>Download files from web for class</i>	
Mar 16 - 20: NO CLASSES DUE TO SPRING BREAK			
18 (Mar 23) MEET IN BUS 419	<u>Case Application (III): Valuation</u> • Valuing Smucker's • Scenario Analysis • Sensitivity Analysis	<i>Download files from web for class</i>	
19 (Mar 25)	Review for Mid-term Exam 2		Practice exam and Review of topics (see web page)
20 (Mar 30)	Mid-term Exam 2 – Module B	In the classroom, during class time	

MODULE C: CAPITAL STRUCTURE AND PAYOUT POLICY			
<i>Class Number</i>	<i>Topics Covered</i>	<i>Required Reading and Assignments</i>	<i>Recommended Problems and Spreadsheet Exercises</i>
21 (Apr 01)	<u>Cost of Capital</u> <ul style="list-style-type: none"> WACC without taxes WACC with taxes Divisional WACC 	RWJ Ch 15	RWJ Ch 15 Problems 1, 6, 7, 9, 12, 15, and 20
22 (Apr 06)	<u>Multiple Valuation</u> <ul style="list-style-type: none"> Definition of Market Ratios Price Earnings Ratio Problems 	BS Ch 10	
23 (Apr 08)	<u>Capital Structure (I): Perfect Market</u> <ul style="list-style-type: none"> Assumptions Proposition I: WACC Proposition II: Cost of Equity Business and Financial Risk Unlevering Beta 	RWJaffe Ch 15	RWJaffe Ch 15 Questions 7, 10, 11, 14
24 (Apr 13)	<u>Capital Structure (II): Imperfect Market</u> <ul style="list-style-type: none"> WACC with Taxes WACC with Bankruptcy Costs Incorporating Changes in Leverage Value of Levered Firm Dollar gain from Tax Benefit Dollar cost due to Bankruptcy 	RWJaffe Ch 15 RWJaffe Ch 16	RWJaffe Ch 15 Questions 15, 20, 21 RWJaffe Ch 16 Questions 1, 3
25 (Apr 15)	<u>Capital Structure (III): The Real World</u> <ul style="list-style-type: none"> Agency Costs: Debtholders and Shareholders Agency Costs: Managers and Shareholders Discuss <i>Capital Structure Puzzle</i> 	RWJaffe Ch 16 Chew Ch 13	RWJaffe Ch 16 Questions 10, 17
26 (Apr 20)	<u>Payout Policy (I)</u> <ul style="list-style-type: none"> Types of Dividends Irrelevancy of Dividends Taxes Stock Repurchases 	RWJaffe Ch 18	RWJaffe Ch 18 Questions 2, 5, 7, 10, 17, 20
27 (Apr 22)	<u>Payout Policy (II): The Real World</u> <ul style="list-style-type: none"> Dividend Clientele Signaling Review for the Final Exam		Practice exam and Review of Topics (see web page)
28 (Apr 27)	Group Presentations <i>Mandatory Attendance Day</i>	PROJECT 2 DUE	
29 (Apr 29)	Group Presentations <i>Mandatory Attendance Day</i>		
May 6	Final Exam - Module C	(12:30-2:30pm)	